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FASTeTEN: a Methodology for the Deployment of a Flexible Technology in Different European Administrative Contexts

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Abstract: FASTeTEN, which is supported by the European Commission through the eTEN programme, is a project to examine how a secure electronic document exchange system, developed in France, can be deployed for the benefit of administrations and citizens across Europe. The project is aiming to adapt an existing technology – the FAST bundle of services – to different contexts across Europe, thus leading to concrete good practice exchange. In order to do this it has been necessary to define a methodology that will allow the analysis of different administrative contexts and the adaptation of a flexible technology to them.

1. Overview

FASTeTEN is a project, supported by the European Commission, to pilot the deployment of an award-winning trust infrastructure. The project contributes significantly to the Commission's defined eGovernment objectives for Europe: providing tools that can be used flexibly and interoperably by European administrations, for the benefit of businesses, citizens, and the administrations themselves.

FASTeTEN started in January 2007 and will continue until the end of 2009. It deals with the adaptation of a bundle of eGovernment services to different European contexts. The services themselves provide secure exchange of electronic documentation between government ministries and agencies. In doing so, FASTeTEN addresses the key issues of authentication, authorisation, confidentiality, integrity, and non-repudiation. The project also analyses how different services (time-stamping, signatures, receipting, archiving) can be adapted to different circumstances.

Even though FASTeTEN is not completed, the project has done much of the groundwork involved in adapting the FAST bundle of services (see below) to different contexts in different regional administrations. This experience has been a concrete demonstration of valuable good practice exchange, and has already provided important lessons for potential future deployments of FAST. The project is being monitored by a potential deployers' group, representing a number of different countries that are interested in future deployments of FAST.

In working on concrete transfer of good practice, FASTeTEN puts into practice lessons learned during an earlier project, which a number of the FASTeTEN partners also participated in. This was the Provide eGovernment Good Practice Portability project (P*P*P* project)[i] By exploring methodologies for transferring good practice, based on a number of concrete examples, P*P*P* found that an ‘industrial model’ is rarely appropriate for transfer of eGovernment good practice. Instead, communities of good practice present

an alternative and more appropriate model for transfer of good practice. An approach based on this experience has been employed in the FASTeTEN project[ii].

The project potentially benefits a wide range of government agencies. In France, where the FAST bundle of services has been developed (see section 2), FAST has been piloted in local and regional administrations, allowing them to communicate more efficiently with more centralised levels of government (for example, allowing transfer of legal acts signed by a local administration to a higher level of administration, so that the act in question can be verified for its compliance with French law). In the FASTeTEN project, FAST is being pilot implemented at both the regional and municipal level of government. The potential deployers' group that is monitoring FASTeTEN includes representatives of national, regional and local government[iii].

Government agencies at different levels can benefit from the trust infrastructure because it is flexible and can be adapted to a wide range of circumstances – as the FASTeTEN project is demonstrating.

2. The FAST bundle of services

FASTeTEN is a project to deploy the FAST bundle of services for secure electronic document exchange in different European contexts. FAST stands for Fournisseur d'Accès Sécurisés Transactionnels (Secure Access Gateway Provider). Its development began in 2002, supervised by French-government mandated public financial institution Caisse des Dépôts et Consignations (CDC). FAST has been extensively and successfully tested in the French départements of Yvelines and Deux-Sèvres[iv].

FAST has been shown to offer significant resource and efficiency savings. Using FAST, public administrations can streamline their operations by switching their document management systems onto an electronic platform. Documents can be exchanged securely and efficiently in electronic format, between different agencies and different levels of the administration. FAST allows Fully Automated Secure Transactions.

FAST cuts down on paper documentation and on the costs of delivering documents by post. It saves time because electronic transmission of documents can be done instantaneously, rather than requiring several days for documents to be delivered by post.

One example of this in France concerned legal decisions made by local authorities, which must be checked by prefectures for compliance with the law. It typically takes between two days and a week to send paper documents between the local authority and the prefecture. With FAST, the same work is completed in three to ten minutes – a concrete example of how administrative services can be effectively modernised.

FAST offers further benefits including reducing the opportunity for fraud (falsification of paperwork), reducing the number of errors in paperwork, and enabling documents to be transferred directly between authorities, without the need for citizens to collect them from one agency and deliver them to another (for example as part of an application for a benefit).

The FAST bundle includes the following services:

- Automated, secure document exchange
- Legally recognised acknowledgement of receipt
- Electronic certificates and signatures
- Secure encryption of information
- Traceability (electronic paper trails), timestamping, and archiving

3. The project framework

FAST was developed in France and was designed in the first instance for French administrative procedures, such as the system of passing decisions made by the lowest

levels of government up the chain to higher levels so the compliance with the law of the decisions can be verified. Nevertheless, FAST has the potential for flexible adaptation to other administrative circumstances. The objective of the FASTeTEN project is to define a methodology for this adaptation, initially by carrying out pilot European deployments of FAST in Spain and the United Kingdom.

In Spain, FAST is being deployed in Valencia. The aim is to implement a fully electronic secure channel for public procurement in the Regional Government of Valencia (GVA). This application will not only provide local benefits because of the changeover from a paper-based to an electronic procurement process, but it will also offer the possibility of building a cross-national eProcurement application using FAST as a common secure communication platform. In preparation for this, the Valencian eProcurement application will be implemented in compliance with the relevant EU Directives and guidelines (for example, the European Interoperability Framework).

In concrete terms, FASTeTEN will transform all the paper workflow involved in GVA procurement processes into electronic workflow. To this end, the FAST platform will use the regional PKI and will integrate with existing internal IT systems.

In the United Kingdom, FAST will be used in educational services in the city of Sheffield in the north of England. Using FAST, a set of education-related services will be established in Sheffield, enabling exchange of information between local authorities, parents, and children. The overall aim of these services will be to improve attendance at schools, encourage parents/guardians to take a more active role in their children's education, improve educational attainments, and ensure child safety.

The FAST application in Sheffield will be deployed initially in ten schools, and will involve approximately 500 parents. All users will be trained and assisted during their first use of FAST. The already established Sheffield Registration Authority will coordinate the electronic signature delivery and provide the back-up required for the end-users. Training packages for further take-up will be made available. The deployment leader in Sheffield, Sheffield City Council, will conduct a user study in due course to analyse the benefits of this first application and determine the functional areas where the system could be replicated.

Importantly, The FASTeTEN project has established from the outset a mechanism that will smooth the path to on-going deployment of FAST in different contexts in different European countries: a potential deployers group. This methodology is based on work previously done in the P*P*P* project (see section 1, overview, for background information on this). This group will monitor the pilot deployments, and make an assessment of benefits and obstacles. The deployers group will evaluate the benefits of FAST for their own countries and circumstances, with a view to potential future deployments across the European Union.

The potential deployers are:

- The Region of Brussels, Belgium
- The Flemish Community, Belgium
- The Foundation for Local Government Reform, Bulgaria
- The Prime Minister's Office Electronic Government Centre, Hungary
- The City of Prato, Italy
- The Ministry for Innovation, Investments and Information Technologies, Malta

4. Methodology

Although the project is only around half way through at the time of writing (June 2008), a methodology for the adaptation of the bundle of services to different European contexts has

been defined. In Valencia, the FAST bundle of services went live on the regions eProcurement platform in April 2008. In Sheffield, the integration is yet to take place[v].

The Valencian deployment has been through several steps. First, a scoping exercise was carried out to define the current structure of the eProcurement portal to better understand where FAST would fit. The eProcurement service has been offered by the GVA since 2004 but it is currently being redesigned to be compliant with EU directives (Directive 2004/18/EC) and new national legislation. The redesign includes the implementation of new eProcurement procedures as well new security mechanisms according to the guidelines provided by the European Commission under the Interchange of Data between Administrations programme (IDA)[vi].

The GVA portal embraces a range of procurement procedures: individual contracts (open procedures, restricted procedure); repetitive contracts (Dynamic Purchasing System (DPS), a fully electronic process for contracting authorities for making frequent purchases, which are generally available on the market and meet the requirements of the contracting authority, framework agreements); and extensions by electronic auction.

Following the scoping exercise, a workflow was defined and reviewed along with the data format definition of the eProcurement platform for open procedures, in order to include FAST functionalities. The electronic workflow addressed the functions of the system (functional workflow) and its technical aspects (technical workflow). Data format definitions dealt with business envelopes, headers, contract notice documentation, and tender documents.

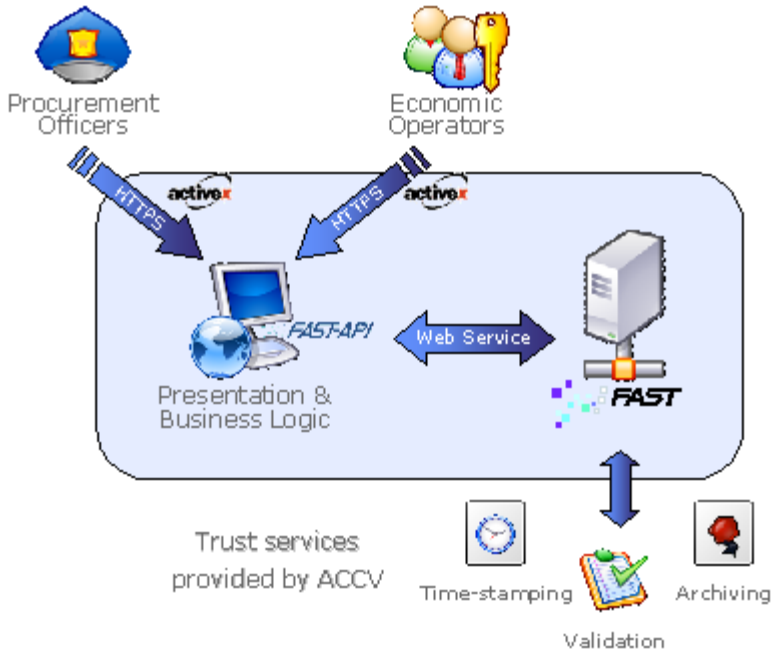

Figure 1: the FAST deployment in Valencia

Electronic workflow analysis was complemented by a definition of the system requirements for the steps that involve the use of FAST. FAST has developed proprietary applets, which are provided to local editors. The purpose of these applets is to help editors create FAST-compliant envelopes, with XML signatures. Nevertheless, their scope concerns generic actions and all business parts must be addressed by the application itself.

The examination of system requirements also address other key FAST services: interaction with the FAST proof server, integration of certificate validation services, and dealing with time-stamping and archiving services.

Once these studies had been carried out, a further exercise identified how the FAST bundle of services and the electronic workflow analysis could be best brought together. To address the workflow and the system requirements, several software components had to be developed or integrated into existing platforms and linked between them. These components addressed the system requirements as noted above: interaction with the FAST proof server, integration of certificate validation services, and dealing with time-stamping and archiving services. The third study (software design definition) described the integration of existing workflows and FAST services in detail.

Each step was open to review by the FASTeTEN potential deployers group, members of which were able to express their concerns about particular aspects of the pilot deployment, and to raise questions about possible future deployments in different contexts. In the Valencia case, this has been shown to be an effective approach. The Sheffield deployment, at the time of writing, is continuing in line with this approach.

5. Conclusions and recommendations

Although the FASTeTEN project is not yet completed it has already contributed an important case study concerning eGovernment good practice exchange, specifically in the field of secure infrastructures, authentication, and identity management. FASTeTEN has been deployed in a pilot deployment in Valencia according to a standard methodology defined by the project. A second pilot deployment, in Sheffield, England, is pending. In working on these pilot deployments, the project has provided a methodology for adaptation of electronic services to different eGovernment contexts, and for the multiplication of the impact this methodology through a potential deployers' group, and significant lessons concerning the details of a secure infrastructure deployment involving the adaptation to a new administrative context of a bundle of services that was developed for a particular administrative context.

The project will produce further lessons as the pilot deployment of FAST in Sheffield progresses, and as the potential deployers' group considers the results of both pilot deployments, and examines potential future deployments. FASTeTEN will deliver full recommendations in due course, as the project concludes.

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[i] For information about the P*P*P* project, which finished at the end of 2006, see the project's website: http://www.eu-ppp.org/article.php3?id_article=295

[ii] Information about the methodology developed by the P*P*P* project is contained in a high-level report written at the request of the European Commission, which sets out the main findings of the project and considers their implications for European eGovernment. This report can be found at http://www.eu-forum.org/article.php3?id_article=636

[iii] See http://www.eu-fasteten.eu/-Members-.html

[iv] For background information see http://www.efast.fr

[v] See press statement of 19 May 2008: http://www.efast.fr/sandpit/pdf/2008_05_29-18_15_46-communique-de-presse-eten-pdf.pdf

[vi] "Functional Requirements for conducting electronic public procurement under the EU Framework" (European Communities, 2005). Available at: http://ec.europa.eu/idabc/en/document/4721/5874